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VOCATIONAL EDUCATION IN THE UNITED STATES

THE PROGRAM OF COOPERATION OF THE FEDERAL GOVERNMENT WITH THE STATES IN VOCATIONAL EDUCATION AND VOCATIONAL REHABILITATION OF THE DISABLED

PRESENTED BY MR. SHEPPARD

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VOCATIONAL EDUCATION IN THE UNITED STATES[1]

In 1926, the last year for which the United States Bureau of Education has complete data, there was expended in the United States, including a part of the Philippine Islands and Hawaii, for all kinds of education—elementary, high-school, and college—more than $3,000,000,000. Of this total there was expended for vocational education by the Federal, State, and local governments $23,181,700, or just a fraction less than nine-tenths of 1 per cent of the whole. Stated in other terms this means an expenditure of only $1 for vocational education for each $100 expended for education of all kinds. Of a total population of approximately 123,000,000 persons in 1930, approximately 45,000,000 are engaged in gainful occupations. Of this 45,000,000, 92 per cent work with their hands, the remaining 8 per cent being made up of the professional, the executive, and the managerial groups.

In designating certain workers as those who work with their hands it is not meant to draw any fast and hard line of demarcation between the professional and the so-called nonprofessional groups. As a matter of fact, both groups are engaged in the exercise of both mental and manual faculties, with emphasis ranging from a preponderance of the manual faculties on one end of the scale graduated to a preponderance of mental faculties on the other. Certainly it is not correct to say that those who are engaged in pursuits which require a preponderance of the exercise of the manual faculties can perform their duties without training which simultaneously involves the exercise of their mental faculties. The distinction is one rather of convenience than of characterization. It is not true of any employment, however humble and manual in character that no exercise of intelligence is involved, nor on the other hand is there any employment however largely administrative or executive it may be which does not involve some manual or physical exertion. All work requires some intelligence and training or experience, some work requires much training and experience. Moreover, it is true that one way of training the brain is through training the hand, and one way of training the hand is through training the brain. There is no artificial separation in the human physique of brawn and brain. They must be trained and exercised together.

Of the 45,000,000 persons gainfully employed under normal conditions it is estimated that to-day more than 4,000,000, or approximately 10 per cent, are without employment of any kind, being economically dependent either upon their families or public or private charity.

From fairly reliable sources the number of unemployed has been given as varying from between four to six millions. The exact number is not known. And yet, as indicated, the United States expends

[1] This study prepared at, and in accordance with, the request of Senator Morris Sheppard, is based upon the researches of the Federal Board for Vocational Education and the President's Employment Commission.

annually more than $3,000,000,000 for education. It may well be asked under the circumstances whether the United States is receiving an adequate return upon its educational expenditure.

In 1913 Congress provided for the creation of a presidential commission to investigate the problem and to report upon the desirability and feasibility of Federal aid in the promotion of vocational training. As a result of the studies made by this commission, as well as from congressional hearings, it was revealed that of the men and women engaged in agriculture and manufacturing in this country, of which there were more than 23,000,000, only 1 per cent were technically and skillfully trained to do the things that they were attempting to do. We were importing our trade skills from Germany and other countries in the form of craftsmen who had been given thorough vocational training before they came here. We were dependent upon these foreign sources for our trade skills. This was felt to be a national disgrace and a real menace, which might spell national disaster in case of war. Our national program of vocational education was in part an attempt to remedy this situation.

Of approximately 12,500,000 persons engaged in agriculture in the United States in 1910, not more than 1 per cent had had any adequate preparation for farming. Of 14,250,000 persons then engaged in manufacturing and mechanical pursuits, not 1 per cent had had any opportunity for adequate training. Of the 25,000,000 persons over 18 years of age in the United States engaged in farming, mining, manufacturing, mechanical pursuits, trade, and transportation, the commission said that if these persons had been able to pursue a system of vocational education their wage-earning capacity, if increased at the rate of only 10 cents per day, would have constituted a wage increase for the group of almost $750,000,000 a year. This is certainly a fair dividend on an expenditure of $10,000,000 of Federal money each year.

The commission estimated the personnel requirements of our industries at that time as approximately a million new young people annually.

Of more than 7,000,000 young people between the ages of 14 and 18 years, only slightly over 1,000,000 were enrolled in high schools in 1910, and of these only a very small number were pursuing studies of a technical character. This vast body of potential workers needed vocational education to make it efficient. The commission believed that the development of trade skills should become a domestic industry, that we should take steps to build up this industry and free ourselves from dependence upon foreign vocational training systems. The commission protested against the system of exporting our raw materials—the products of our farms and mines and forests—and importing trade skills in the form of these same materials worked up by skilled labor in foreign countries, with which we must compete in the world's markets.

SMITH-HUGHES LEGISLATION

The recommendations of the commission ultimately came before the Congress in the form of a bill presented in the Senate by Senator Hoke Smith, and in the House by Representative Dudley Hughes. The bill was approved by President Wilson on February 23, 1917. The fundamental act was approved by a Democratic President, but

the act itself was passed in both Houses of Congress without a dissenting vote. Republicans and Democrats united in its support, and successive Republican administrations have approved expansion of our program of vocational education.

The Smith-Hughes Act of 1917 provided for a Federal Board for Vocational Education; acceptance of the law by the States; national aid to the States for the salaries of teachers in the vocational schools and classes set up under the new national program; the States which voluntarily elected to cooperate under this joint program were required to match the Federal money dollar for dollar; provision was made for national studies and investigations regarding the vocational training needs of agriculture, home economics, industry, trade, and commerce. The vocational courses set up under the program were to be under the local supervision of public-school authorities in the States. The instruction must be suitable for students over 14 years of age. It must be of less than college grade, and must be intended primarily for those who had entered or who intended to enter a trade or useful industrial pursuit.

At the time of the passage of this legislation, every agency of our educational system—grammar school, high school, college, and university—was engaged particularly in providing training of academic character, adapted to what were conceived to be the requirements of a liberal arts or professional education. Only 8 per cent of our population ever got into these liberal arts and professional employments. Nevertheless, this sort of education was the only sort made available for anybody. The great mass of our population, representing the 92 per cent of our boys and girls, had no opportunity to get the sort of training they needed—that is to say, training directed toward their peculiar needs in the rôle they must of necessity occupy in the economic and industrial life of the Nation. Training absolutely essential to insure their economic welfare was to be acquired only at their own expense or as apprentices in the crafts in which they engaged, under conditions neither scientific nor efficient, and to the material disadvantage of our whole industrial system. There is no contention here for less of this general academic education, but rather a desire to indicate the need for more ample provision for education specifically adapted to meet the vocational needs of our workers. The pick-up method of vocational training is entirely out of date, and the Nation which to-day neglects to train its workers scientifically is bound to lose out in the world's markets in competition with foreign nations, who have more accurately appreciated the economic value of adequate vocational training.

It is this 92 per cent of our workers who produce our food, our clothing, and our shelter. It is they, indeed, who produce not only the books but also all other instruments and materials upon which the 8 per cent are dependent in acquiring their education and training. The 92 per cent build our schools, our factories, our public buildings, our palatial private residences, and our mangificent structures of commerce and finance. They dig the coal, chop the wood, drill the oil, and produce the electricity for our light, heat, and power. It is they who clear our forests, build our railroads, span our rivers, and tunnel our mountains. It is they who have constructed the vast ocean liners, who have laid the ocean cables. They, too, have built our roads, our automobiles, our airplanes, and our radios.

And yet, it is from this group who contribute daily to our peace, our security, and our comforts that to-day the larger part of the great army of unemployed has been recruited. They reflect most and are more quickly responsive to the ever recurrent changes of our industrial life and progess, and lacking the flexibility of readjustment to these rapidly changing methods and processes find themselves constantly confronted with the hazard of unemployment. The introduction of every labor-saving device, the adoption of every new process in chemical and industrial engineering, involves an additional hazard of unemployment to those whose training and skill are inadequately responsive to the necessarily concomitant readaption.

It is with this great group of our population that the Smith-Hughes Act and subsequent acts, kindred in character, are concerned. At perhaps no other time in our history has the value of its benefit been more adequately realized and the necessity for its development and its continuance been more imperative.

The great leaders of our industrial life, indeed, the President of the United States himself, are unwilling to recognize the long-asserted fallacy that industrial depressions are inevitable, that they are, like floods and droughts, the acts of God. To-day the economists insist upon the principles of cause and effect being applied to industrial depression as to every other problem economic in its nature. For the first time in history, America to-day seeks by every process to correct the condition with which we are confronted. To-morrow we shall no longer be concerned with curative and remedial measures alone, but with measures of prevention. To-day the greatest of our captains of industry recognize clearly the inseparable interrelationship between consumption and production, hours of labor, and dollars of pay. It is the untrained or inadequately trained worker who loses his job first, and who finds greatest difficulty in getting a new job. The untrained worker is the first to be fired and the last to be hired, and in hundreds of thousands the untrained worker constitues the army of the unemployed.

Vocational training is of course not the only remedy for unemployment, but to the extent that the industrial progress, the introduction of machinery, the establishment of entirely new industries, mergers and consolidations of industrial enterprises, the geographical displacement of industry, or any other of the thousand and one changes in our economic system, tend to throw labor out of employment, through no fault or lack of foresight on their own part, a social responsibility is created by these changes to provide a way and means of earning a living for those definitely thrown into the ranks of the unemployed. Vocational training at public cost, to the extent that it can be utilized as a means of minimizing the evils of unemployment should be liberally provided for.

No man willing to work, able to work, needing to work to provide for himself and his family, should be left to walk the streets seeking work, or stand in the bread line for food, or continue dependent upon charity or doles, provided he can be trained back into regular employment. At least to the extent that he needs training, training should be provided at public charge.

TYPES OF EDUCATIONAL SCHOOLS

As a direct result of the participation of the Federal Government in the program of vocational education, three types of vocational schools have been established as integral parts of our public school system: (1) The vocational day school, for boys and girls who have chosen an occupation and desire training for it; (2) the part-time school, for persons who are employed but who can devote part of the day to receiving systematic instruction and training in the line of their employment; (3) the evening school, for workers who desire to devote some time outside their regular employment hours to improving their efficiency in the occupations in which they are engaged. Instruction in these schools reaches out into those employments which require such technical or mechanical skill as may be taught advantageously in the public school or under its supervision. In 1930 as a result of the stimulus given this endeavor by the Federal Government, more than a million persons of both sexes, young and old, were enrolled in these schools learning to farm better, to make better homes, or to be more efficient at some particular job in industry. And this as a result of but slightly more than 10 years' participation on the part of the Federal Government.

What is the worth—the dollar value of this training? What return does the community get for it? We can not measure it accurately. But we may say that it certainly pays for itself many times over. If the earning power of labor is increased by only a few cents a day, the return will be many times the cost. Each penny added to the daily earning power of our 45,000,000 workers gainfully employed means $135,000,000 of increased production power a year. It is not unreasonable to assume that an adequate vocational program will increase the earning power of our workers by so much as 1 cent a day. And yet even this insignificant return would exceed more than four times our present total expenditure for vocational education. Expenditure for vocational education is an investment which is bound to pay large dividends.

The objective of the Federal Board for Vocational Education, the Federal agency charged with the promotion of this vital aspect of our educational program, has been in part to assure to every boy and girl, every adult worker, and every disabled person in America an opportunity to acquire or to improve his or her vocational efficiency in some selected field of human endeavor, and this upon the theory that educating for work is as truly the responsibility of our free public-school system as is educating for college, for the professions, for citizenship, or for leisure. Indeed, it is undeniable that our future prosperity is inseparably associated with training for industrial or vocational efficiency. The pursuit of happiness is in no small degree a part of the citizen's ability to find employment suited to his capacity, and to be able so to devote himself to such employment as to derive therefrom the greatest degree of satisfaction incidental to such employment. It is upon this principle that an efficient citizenship must be developed, and to this end, certainly the Federal Government should be willing to contribute.

AGRICULTURAL EDUCATION

Due to the fact that the Federal Government had, under the land-grant acts, endowed in each State a college of agriculture, it was but natural that agricultural education for pupils of high-school age should have been the first of the vocational subjects to be developed.

Although in 1910 not more than 1 per cent of the total agricultural population had had adequate preparation in farming, in 1930 about 7,000 agricultural schools were receiving Federal aid under the program which Congress has established. Of this total of 7,000 schools, 3,905 were all-day schools; 582 were day-unit schools; 315 were part-time schools, and 2,116 were evening schools. The total enrollment in all these schools devoted to training in vocational education for agriculture approximated 200,000 of our farm boys and girls and of our adult farmers.

Since the objective in vocational education in agriculture is to reach all groups of men and boys on the farm with a type of education to be of immediate use in solving the daily problems of the farm, the significant value of this training must be at once apparent, especially at a time when the Nation has been compelled as never before to regard the agricultural problem as worthy the attention of the best minds of the Nation. America is no longer confronted with the problem of making two blades of grass grow where but one grew before. This may now be regarded as elementary in the problem. Conservation of fertility, utilization of waste and by-products, diversification of crops, transportation and marketing, are all among the fundamentals of agriculture with which the farmer of to-morrow must be intimately familiar. And these are principles in the science of agriculture which affect every citizen in the Republic, for upon their successful solution depends in large part the prosperity of the Nation as a whole.

Whatever significance attaches to training in agriculture afforded by means of the all-day school, a far greater significance attaches to evening schools for adult farmers, for here indeed is manifest not only an increasing popularity of this type of school, but the value which the adult farmer places upon it as a means of developing himself in his chosen vocation.

When it is recognized that persons living in cities have in the past been able to avail themselves of evening schools of many types, and that until the intervention of the Federal Government, the adult farmer was denied every opportunity of developing himself by means of such instrumentality, the value of the work now being conducted in evening schools for adult farmers gainfully employed during the day can not be overestimated.

During the year 1930 more than 64,000 persons were enrolled in these schools, exceeding in some States the enrollment of the all-day departments.

Among the activities developed by the Federal Board for Vocational Education, which are reflected in specific benefit to the Nation as a whole has been: (1) The development of a program carried on cooperatively with the National Live Stock and Meat Board of Chicago and the United States Department of Agriculture, involving the judging and identifying of the different cuts of meat; (2) cooperation with the Federal Farm Board in the development of an educational program

in the principles and practices of cooperative marketing of agricultural commodities and food products, with night classes for farmers growing crops which are marketed cooperatively under the farm-board plan; (3) cooperation with the Division of Market Milk Investigations of the United States Department of Agriculture for the purpose of instructing students in the quality of dairy products. The value of such training must be apparent from the following statement of the United States Department of Agriculture, Division of Market Milk Investigations:

> The dairy industry must immediately turn its attention to the question of quality in milk and cream. Poor quality in dairy products is the cause of losses amounting to millions of dollars annually, and a very high percentage of this loss is due to lack of care in the production and handling of milk and cream. There is a wide difference in the commercial value of milk and cream of high and low grades. Dairymen in the past have been apt to neglect this phase of the question and to strive solely for increased production and economy in production through breeding, feeding, selection, and so forth. Lowering the cost of milk production is extremely important, but unless a product is produced which will command a fair price and find a ready market the labor expended in economical production is very largely lost. Quality in dairy products is the basis of successful, economical dairying. For this reason any educational campaigns, demonstrations, and methods of teaching clean milk production are of the utmost importance pedagogically and economically to the industry.

THE AGRICULTURAL PROGRAM IS SOUND

That the program of Federal aid for vocational education in agriculture is sound has been established by the experience and results of more than 10 years of successful operation.

In its cooperative relations the autonomy of the States has been preserved by means of the provision that, although each State using Federal funds for the purpose of promoting vocational education in agriculture must submit a plan indicating the manner in which it purposes to conduct the work, in the administration of the details of the work to suit their own special needs and conditions the States have been permitted adequate freedom.

The farm boy desiring to advance himself in his occupation of farming has been able to find at a local school within the community where he lives adequate resources and training facilities. Above all he has been able to earn while learning, thus gaining a most desirable type of education through actual participation in farming activities.

It is to be observed that while the purpose of general education is concerned primarily with familiarizing the pupil with certain commonly useful elements of the racial heritage, the purpose of vocational education is directed specificially to training in those activities whereby a person expects to earn his living, and to render practical service to the community in which he lives, since a community benefits as a whole largely in proportion as its individual members benefit under the program. It is a universal principle that the economic well-being of a community is measured in terms of the individual earning power of its individual citizens.

EXPENDITURES FOR VOCATIONAL EDUCATION IN AGRICULTURE

It must be observed primarily that funds for vocational education in agriculture are derived from three sources—local, State, and Federal. Expenditures for vocational education under the vocational

education act of 1917 reached their maximum from Federal funds in 1926, the year specified in the act as the year of maximum expenditure. It is of significance, however, that since the year 1926 total expenditures from all sources for vocational agricultural education have constantly increased, the increase for the years 1927–1929 coming from local and State authorities. The total expenditure for this type of education in 1926 was $7,164,460; in 1927, $7,469,295. It is of even further significance that by far the largest amount of the expenditures of 1927, $3,158,638, or 42.3 per cent, came from local funds. State funds constituted more than 20 per cent, or $1,509,000. Federal funds constituted but 37.5 per cent, or $2,801,591. The figures for 1930 are as follows, including expenditures of some $228,000 for vocational agriculture under the George-Reed Act, which became effective for the first time in this year.

Expenditures for vocational agriculture in the fiscal year ended June 30, 1930

Total	$8,749,072
Federal money	3,173,624
State and local money, total	5,575,448
State money	1,792,937
Local money	3,782,511

DOES IT PAY TO TEACH FARMING?

Inevitably there is ever present in every Federal project the question of its value. America has long since adopted the principle that an educated and enlightened citizenry is the greatest asset a nation can have, and to this end has embarked on the most extensive program of free public education ever undertaken by any nation. Long before the proposals contained in the Smith-Hughes Act and subsequent legislation the United States had embarked upon a system of free education, which, although designed in part to perpetuate the culture and ideals of the race, yet fell far short of the ideal of providing those gainfully employed in vocations other than the professions with a knowledge necessary to the efficient pursuit of such vocations. For more than 140 years we had been developing public schools and a system of public education in no way related to the needs of the vast majority of our population who found it necessary to secure a living from manual labor.

From reliable sources it has been estimated that the cost of educating a doctor at the University of Iowa approximates $5,000 a year, or $20,000 for the 4-year course. This it is shown, is exclusive of the student's personal needs and of all the costs preliminary to his entering the medical college. Thus the State endows the person desiring to enter the profession of medicine with a capital investment of at least $20,000.

At the same time the same taxing districts expend a total of but $25 a year to render an analogous service to its mechanics, farmers, and home builders.[2]

No fair or adequate picture of the cost of vocational education to the Federal Government can be presented unless there be kept

[2] From an address delivered by Mr. Edward T. Franks, Vice Chairman Federal Board for Vocational Education, before Eighth Annual Meeting Ohio Vocational Association, Columbus, Ohio, Aug. 1, 1929.

prominently in mind at the same time the comparative costs of all other types of education. To-day our cities and towns boast of a type of school structure which may well be regarded as a tribute to the genius of the architect and the skill of the engineer. More and more school plant for the training of those who purpose to enter the professions has assumed proportions and equipment far superior to that of any other nation. Increasing requirement in the qualifications of the teaching staff is being insisted upon with compensation, if not commensurate, at least more adequate. Colleges and universities established upon the basis of the needs for this group reflect the same increasing value of plant, equipment, and staff. Against this there can not be any complaint on the part of an American citizenry awake to the needs of education in a republic, nor is there. Perhaps no item in the tax bill is more cheerfully met than that for purposes of education.

But in all fairness it must be observed that when compared with the total expenditure for education of all types in the United States that for vocational education—education for the primary needs of 92 per cent of the population—is insignificantly low. In the majority of instances vocational education is afforded no special school plant, but is conducted in school buildings already erected for academic purposes. The teaching staff, trained especially for this type of instruction, receives a salary comparable but not in excess of that accorded similar services in the academic staff. The cost to the Federal Government has been insignificant when compared with other types of Federal aid, and must be regarded as insurance and investment rather than capital expenditure. The Republic can make no greater investment than that of a competently trained and efficient electorate, and certainly can in no more successful manner insure itself against the ills of unemployment.

Whether or not the Nation receives an adequate return for this tremendous expenditure of $3,000,000,000 for education of all kinds is a question which may very well be accorded careful consideration. But there can be no question whatever regarding the economic and social value of the return to society for the relatively small expenditure of $30,000,000 of local, State, and Federal money under the program of vocational education set up in 1917 and expanded in the successive legislative acts with the support of both Democrats and Republicans alike. Certainly it is not unreasonable to assume that of the total expenditure of $3,000,000,000 for education in this country a sum greater than $1 in every $100 should be devoted to the development of vocational and wage-earning efficiency, which is a certain means of raising the standard of living of American workers.

It is not contended that less should be spent for general education. Certainly this Nation has long since gone on record as recognizing every dollar expended for education as constituting an investment of the highest type. But the expenditure for vocational education, which affects 92 per cent of the people, is tremendously inadequate when compared with that expended for only 8 per cent of the population. In other words, 99 per cent of the total expenditure for educational purposes is devoted very largely to the needs of 8 per cent of the population, while only 1 per cent is expended specifically for vocational training for the 92 per cent of the population.

If we can afford to spend $15,000 to $20,000 to educate a physician, as we are doing; if we can afford to provide liberally for high schools to fit boys and girls to enter college, whether or not they intend to go to college, as we are doing—if we can afford to do this, then certainly we can afford to provide more adequately for the vocational training of those boys and girls who do not go to college and especially for the vocational training of adult workers who, while they are employed, may need training to enable them to hold their jobs and to increase their earning power, and who, if displaced by machine or by the introduction of new processes, may need training to enable them to secure a new job. Economy in this field of education is, indeed, very poor economy. It is not economy at all. It is the most foolish sort of extravagance.

Among the millions unemployed to-day are many hundreds of thousands who require some sort of vocational training to fit them to take up employment at some new job which has developed in the process of improving the efficiency of our industrial system. So long as these hundreds of thousands who could be benefited and brought back into employment by proper vocational training are walking the streets unprovided for we can not fairly say that we have discharged the social responsibility resting squarely upon our municipal, State, and National Governments.

No unemployed person who needs training to enable him to get a new job should be denied the opportunity to get such training as he needs and to get it at public cost. Training for a new job is clearly the logical remedy for that portion of unemployment which results from lack of training on the part of the unemployed worker.

EARNING WHILE LEARNING

That which is of greater significance for vocational education, however, is that those who seek thereby to improve their efficiency and their earning capacity achieve this objective during the actual pursuit of their training. Earnings from agricultural-project enterprises conducted by boys pursuing courses in vocational education amounted in 1926 to more than $5,000,000. The average project income of approximately 50,000 boys reported amounted to almost $110 per boy, while the average per capita cost of instructing these boys in terms of teachers' salaries amounted to only $74.87 per boy. Thus here is education paid for during the process of education itself. The files of the Federal Board for Vocational Education contain innumerable instances of similar illustrations of the returns from vocational education in agriculture.

A survey made in 111 departments of vocational agriculture in Missouri shows that, in addition to investments in crops, livestock, machinery, fertilizer, and land, 546 boys, out of a total of 3,084 boys studying vocational agriculture, have $37,718.57 on deposit in checking accounts, 280 boys have $48,178.65 in saving accounts, and 167 boys have $145,806.05 in stock or bonds. The amount of the investment usually increases in proportion to the time spent in vocational-agriculture courses.

In Virginia 44 chapters of the organization of students of vocational agriculture, known as the Future Farmers of Virginia, reported, in 1927, $164,280 as the amount of their investments in savings from farming.

In the cases of 26 of these future farmers having the largest investments in farming, the individual amounts range from $300 to $2,440.

A vocational boy in Massachusetts started in with a project of three-quarters of an acre of potatoes, earning $212.48 his first year. The next year he had a cow for his project and from that worked himself into a retail milk business, with 15 cows. He borrowed $2,500 from his father and paid back $1,100 within one year besides paying all the costs of the project and his living expenses. In six years he increased his herd to 50 cows and was selling milk both at wholesale and retail.

A boy in California reported the following achievement from his vocational-agricultural project with about 46 hens for one year: Average production per hen per year, 223.5 eggs; gross receipts, $280.98; average gross receipts per hen, $6.04; average cost of grain and mash per hen, $2.17; average overhead per hen, 58 cents; labor income, $147.03; and average labor income per hen, $3.29.

Similar records are available of the results in Ohio, in South Carolina, in Wyoming, and in Oklahoma. Indeed, practically no State in the Union is without a record of the achievements which have resulted from training in vocational agriculture.

Vocational training in agriculture, however, is not limited to the youth of the Nation alone. Out-of-school farm boys and adult farmers are constantly availing themselves more and more of the facilities afforded them through means of part-time and evening classes, and all indications point to the imperative need of extending the service in this field. It is difficult for the average person familiar with the splendid school equipment of our cities to appreciate the fact that surveys show that the majority of persons applying for part-time and evening instruction in vocational agriculture possess but a sixth-grade education. It should not be difficult to realize, however, that any group possessed of fundamental education of no greater extent and lacking the vocational training now recognized as absolutely essential to the efficient conduct of its calling can not be expected to aid in the solution of the economic ills with which it is at present confronted.

There is perhaps no greater indication of the significance which attaches to the efforts of the Federal Board for Vocational Education in vocational agriculture than that which is manifested by many public and private organizations and associations. The American Farm Bureau Federation, the National Grange, the American Royal Live Stock Show, the National Dairy Show, the Pacific International Exposition, the Rotary and Kiwanis Clubs, the Lions Club, Chambers of Commerce, and Boards of Trade have all contributed in some manner to the encouragement and the development of the work undertaken by the boys enrolled in vocational agriculture courses.

A report by the Business Men's Commission on Agriculture of the National Industrial Conference Board (Inc.), and the Chamber of Commerce of the United States of America includes the statement:

> It is certain that the task of transmitting to the rank and file of the farmers the results of agricultural research work must largely be attacked through the improvement in education of the rural youth.

The report further recommends the establishment of instruction in vocational agriculture as a part of the rural school.

HOME ECONOMICS EDUCATION

It is not alone in agriculture, however, that need for vocational training was regarded as necessary nor in which marked progress has been achieved.

Prior to the passage of the national vocational education act but comparatively few schools in the United States offered courses in vocational home economics. Where courses in home economics were offered they were given as a part of the general education, allotted not to exceed two periods a week, and, in the majority of instances, comprised but little more than cooking and sewing.

Great as has been the significance which America has attached to the importance of the school as a vital factor in the development and preservation of the Nation and its ideals, even greater is the significance which it has attached to the importance of the home.

To-day we have come to recognize as well the need of special training for the successful setting up and maintaining of such homes.

Modern psychology accepts the doctrine that influences to which a child is subjected have a marked effect upon its character and disposition, and but little doubt prevails that the preschool period is the most important in the child's life.[3] Authorities seem agreed that the basis for those traits which make up the personality of the individual is laid during this time. According to Dr. Ernest G. Groves:

> It is because of the significance of the child's first few years, physically, mentally, and socially, that society is so largely a product of family conditions, for when the child leaves home to enter school he has already received a large part of the social influences coming out of his environment that determine character.[4]

There has been evidence for many years that certain national defects are traceable in large part to home conditions. Among these may be mentioned infant mortality and juvenile delinquency, two of our greatest national evils. It is also generally conceded that these have been brought about in largest measure by certain home conditions that in many instances are not a result of insufficient incomes, but undesirable standards of living, such as (1) unsatisfactory food, (2) unsatisfactory clothing, (3) unsatisfactory planning for and furnishing homes, (4) unsatisfactory plans for expenditure of income, (5) unsatisfactory sanitary conditions in homes, (6) unsatisfactory and deficient information and its application for disease prevention, (7) unsatisfactory management, (8) unsatisfactory care and training of children, (9) unsatisfactory family relationships.

National standards are simply home standards on a larger scale. Therefore, if we are interested in having national life of the right type, it is necessary to have home life of the right type. Events of the last quarter of a century have brought these truths more clearly than ever before the public mind.

The least standardized of any of the fields of vocational education named in the Smith-Hughes Act was the field of home making; and although provision was made under that act for vocational training in home economics, it was not until the George-Reed Act of February 5, 1929, that definite provisions and appropriations for a program of vocational education in home economics was provided for.

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[3] From "Vocational Education in Home Economics," Bulletin No. 151, Federal Board for Vocational Education, 1930, page 1.

[4] Cited in foregoing, page 1.

The fundamental purpose of the vocational education acts as they relate to home making is to reach as many as possible of the 34,000,000 girls and women of 14 years of age, of whom approximately 24,000,000 are home makers, with a large proportion of the remainder prospective home makers, and to contribute to their efficiency in this vocation.

In order to accomplish this objective three types of schools have been found necessary. The plan is to organize schools and classes and to train teachers to meet the needs of the following groups:

1. Women employed in the occupation of home making either in their own homes or for wages in the homes of others.
2. Girls and women employed outside of homes in industrial, commercial, or other occupations.
3. Household employees in various lines of household work.
4. Girls still in school.
5. House daughters or girls who are out of school and not employed in wage-earning pursuits.

The types of schools adapted to the needs of the particular groups involved are:

(1) All-day schools, designed to reach the girls still in school: These classes are generally organized in the upper grades of the elementary school or in the high school, but may be independent schools. These all-day schools or departments are open also to girls who have dropped out of school, are unemployed, and able to pursue the work for full time. The training in the all-day school is conducted in part by the "home-project" method, definite pieces of work pursued by the pupils under the guidance of the teacher and with the cooperation of the home.

(2) Part-time schools: The part-time school is designed to reach girls and women either in the wage-earning field or at home, who can not attend school five days a week.

(3) Evening schools: The third type of vocational home economics school is designed to reach the home maker and enable her to increase her efficiency in the vocation of home making. The purpose of the evening school is to develop in the women ability to deal with the problems daily arising in the home and to acquire judgment and initiative in the solving of problems which they there encounter. Instruction in sewing, millinery, cooking, child care and training, and home management are all included in the curriculum.

It is obvious that the needs of this program for training girls and women for home making are among the most essential of the needs of our vocational program, and it may well be pointed out that the expansion of this program is particularly needed to make a more adequate program than is now being developed for girls who drop out of school, but who have not entered any wage-earning employment. Moreover, even for girls who have entered upon employment but very poor provision can be made with the program at present available.

Some provision can be made for this group in continuation and part-time programs, but the number which can be reached by these programs is relatively small.

PROGRESS OF THE MOVEMENT

When the national vocational education act was passed in 1917 but three States had laws providing for instruction in home economics in schools. To-day all 48 States have enacted legislation providing for this type of education.

TABLE 1.—*Growth of vocational schools in home economics* [1]

Schools	Number of reimbursed units		Teachers		Enrollment	
	1918	1929	1918	1929	1918	1929
All-day	200	1,011	398	1,487	8,439	41,089
Part-time	[2] 27	103	[2] 71	169	[2] 4,278	20,351
Evening	123	957	688	2,777	22,360	93,450

[1] In the period 1919–1929, the enrollment of girls in general continuation schools, of whom two-thirds to three-fourths take home economics, has increased to 139,834, or 596 per cent.
[2] 1919.

In 1930 there were almost 2,800 federally aided home economics schools with an enrollment of all types of almost 175,000 persons. Of this number, more than 56,000 were enrolled in all-day schools, more than 1,000 in part-time schools, and more than 97,000 in evening schools.

The expenditure of funds for vocational schools in home economics for the year 1929–30 was as follows:

Federal funds	$678,226
State funds	1,286,530
Local funds	2,425,594
Total	4,390,350

The significance of the foregoing figures becomes apparent when it is recalled that for every $1 of Federal funds expended, the State spent $1.98, and local communities $3.57. In other words, $5.46 of State and local money was expended for every dollar of Federal money. The significance is even more striking when it is recalled that the Federal acts providing for this endeavor require merely that Federal funds be matched dollar for dollar. Here the contribution has been more than 5 to 1.

In every State in the Nation the vocational program in home economics is teaching the girl over 14 years of age how to prepare and serve nutritious meals, how to select materials for clothing, how to make dresses, how to care for and repair her clothing, how to care for children—in short, how to be of greater service in her home. At the same time it is teaching the adult women of the Nation how to do more things in the home in a better way.

As the number of women gainfully employed in industry is constantly increasing, and as many women so employed still continue the art of home making, the need for training in the vocation of home making becomes increasingly greater.

Reports of a study of infant mortality recently conducted indicate that infant mortality occurred most largely in the homes of girls who had dropped out of school at an early age, entered wage-earning

pursuits, married young, with little general education, and without any training for the important vocation of home making.[5]

TRADE AND INDUSTRIAL EDUCATION

During the year 1930 more than 600,000 persons were enrolled in federally aided trade and industrial schools, receiving instruction and training in some 225 different trade and industrial subjects, including automechanics, machine-shop practice, printing, electricity, drafting, cabinetmaking, sheet-metal work, patternmaking, plumbing, bricklaying, woodworking, millinery, building-trades operations, dressmaking, tailoring, cooking, painting, general industrial occupations, carpentry, textiles, industrial chemistry, and tool designing and making.

This enrollment for trade and industrial education was distributed among 2,352 schools or classes, including more than 400 all-day schools, 900 part-time schools, and 1,000 evening schools.

The day schools are intended for boys and girls not yet employed, who have chosen an occupation and desire training in it in an all-day school.

Part-time schools or classes are organized to give instruction of less than college grade to persons over 14 years of age who are already employed in a trade or industrial pursuit. Under the provisions of the national act, courses conducted on this basis must be designed to give not less than 144 hours of instruction per year, and these classes must meet during the working hours of those enrolled. The aim of this type of school or class is to give instruction and training to supplement the job experience of learners employed in trade and industrial occupations; for example, groups of apprentices may attend these classes for four hours each week in order to receive instruction related to their trades.

Instruction in evening schools or classes must supplement the daily employment of the students. Enrollment is restricted to those who are 16 years of age or over. They must be employed in the trade or occupation for which training is given. Evening classes are designed to give instruction which will enable those already employed to become more proficient on their jobs and to prepare for promotion. Many journeymen and apprentices attend evening classes offering technical instruction that is not practicable for them to secure on the job.

Thus it is apparent that the schools described above, provided under our present program of vocational education make fairly adequate provision for (1) the boy or girl attending school all day who has elected a vocation and is seeking preparatory training in school to enter upon that vocation after leaving school; (2) for the employed boy or girl who can devote but a few hours a week during working hours to attendance upon a part-time school to secure training along the lines of his employment; and (3) for the employed adult worker who desires training along the lines of his daily employment in order to increase his efficiency in that occupation. On the other hand very inadequate provision is made for training the industrial worker who has been displaced by a machine or a new process or some reorganization of industry, and who requires vocational training not along the

[5] From a study by Adelaide S. Baylor, Chief, Home Economics Education Service, Federal Board for Vocational Education.

lines of his trade, since that is the very thing he has lost through no fault of his own and as a result of changes generally beneficial to society, but for entrance into some entirely new employment.

In this vastly important field of vocational education involving the prosperity of our manufacturing and mining industries and their competitive power in the markets of the world where they must meet the products of foreign-trained skilled labor, the United States is expending less than $15,000,000 each year made up of contributions of our large cities each with its millions of workers, our 48 States extending from the Atlantic to the Pacific and from Canada to the Gulf, and embracing the Territory of Hawaii in the Pacific, plus a contribution by the Federal Government of less than $2,000,000.

This Nation, which expends a total of less than $15,000,000 for the vocational training of its trade and industrial workers, expends more than $62,000,000 in chewing gum alone, not to mention cosmetics and similar nonessentials. Are we willing to admit that a nation which can afford to expend $62,000,000 a year for chewing gum can not afford to expend more than $15,000,000 for the purpose of improving the vocational efficiency of its wage earners?

Under the conditions which prevailed during earlier periods of our industrial life it was customary to learn the vocations, including even some of the professions, by actually entering upon them. With the development of society and the growing complexity of economic and industrial conditions vocational education came to assume an entirely new significance and importance. It has become increasingly necessary to train the youth of the Nation for service in particular vocational fields.

Since the day when 80 per cent of our people lived on the farm or in small villages and towns and under simpler conditions a vast and far-reaching change has taken place. Inventions, labor-saving machinery, steam, electricity, the automobile, improved roads, new world interests, new and more distant markets have come to mark an era characterized by a vast magnitude of great social, economic, and educational needs and problems. A system of apprenticeship, once designed to fit the youth of the Nation for vocational activity, has long been giving way. Enormous natural resources, a tremendous land area capable of sustaining a vast population, a policy of immigration by which it was possible to utilize the technically trained workers of Europe who came to us annually in vast hordes, all tended to obscure our needs for training our youth in the vocations. With the failure of an apprenticeship system at a time when the vocations themselves were developing a content and technique to such an extent as to require the services of trained workers, some agency to fit young men and women for these tasks became imperative. It was to fill this need in part that vocational education in trade and industry was established under the national vocational education act.

Vocational education of this character has as its aim the preparation of new workers for advantageous entrance into industrial employment and the improvement in efficiency of those already employed.

Contrary to the opinion once held that industrial occupations at which women are commonly employed admit of no training and that the period of employment was too brief to warrant specific preparation, facts have established these general conclusions: (1) Lack of

vocational training inflicts an immeasurable hardship upon the young wage earner by keeping her productive efficiency below the normal standard of wage; (2) industrial organization and requirements seriously embarrass and handicap the mature woman who returns to employment or who enters an industrial occupation for the first time; (3) the adult woman worker continuing in employment seldom advances from the lower or intermediate stages of employment to positions of responsibility which such increased maturity and experience justify. Many industries which employ women have found it profitable to maintain some form of vocational instruction. It should be possible for industry to utilize the public agencies of vocational education, and above all women who need to avail themselves of this type of instruction should not be denied it.

It must be apparent that many of the elements which once contributed to our prosperity are now no longer available. Raw materials and natural resources once enormously abundant are not only remote from centers of consumption, involving costly transportation to make them available, but are disappearing with a rapidity which makes the date of their exhaustion almost accurately predictable.

This is certainly true of our forest resources, and unless arrested by some remedial legislation will be true of our petroleum resources as well. We have but begun to learn the lesson of conservation, the prevention of waste, and the utilization of by-products.

Our system of transportation has been undergoing rapid and marked changes. More and more individually operated motor vehicles carrying passengers and freight have come to link city with city, State with State, and coast with coast.

In every aspect of our industrial development there is to-day an insistent demand for trained and skilled workers. A system of apprenticeship, once in universal vogue, has long since proved inadequate and outworn. At great expense and with but inadequate results industry has attempted within its own plants to train its prospective employees. Thousands of workers unskillfully trained lack the skill essential to the highest type of efficiency and performance and fail, consequently, to approximate a degree of competence requisite to the highest reward in dollars and cents. Nowhere, perhaps, has the situation been more forcibly stated than in the following statement of President Hoover, made while Secretary of Commerce:[6]

> My attention has been called to comments in the press on the increasing cost of education and more particularly of vocational education in our public schools. Expenditures in States last year under the Federal vocational education act amounted to less than $15,000,000, or approximately 15 cents per capita. Of this amount States and local communities contributed in round numbers $11,000,000 and the Federal Government $4,000,000. * * * This cost can not be regarded as constituting a serious financial burden upon the community. * * * Expenditure on account of such education is in the nature of an investment which will yield large dividends from year to year through the progressive increase of labor, skill, and industrial efficiency. * * * In some of our State universities the cost of providing education for the professions runs well into the thousands of dollars per graduate. Vocational training for the commoner wage-earning pursuits and skilled trades is equally as essential as is training for the professions. The humblest worker, equally with the youth who proposes to enter the professions, has a right to the sort of training he needs for the occupation by which he proposes to earn his livelihood and support his family and through which he

[6] From an open letter to J. C. Wright, Director Federal Board for Vocational Education, under date of March 30, 1923.

will render his service to the community in getting the community's work done. * * *

We in this country believe that education pays for itself and is worth while and if this is true of any sort of education it is certainly true of vocational education—that it pays for itself. * * *

Men of affairs the country over are being impressed with the fact that the cost of training labor on the job is one of the great industrial costs, but they know that the cost of inefficiency and lack of training is very much greater, and that labor must be trained whatever the cost. If they or the community do not provide such training they can not compete with the foreign producer whose labor is vocationally trained at public expense, nor can we, as a nation, adequately supply our own needs for the product of labor if we neglect to provide for the training of labor.

The cost of providing this training is just as properly a charge upon the public revenue as any other form of education. * * * The cost of such training certainly should not be put upon the individual worker unless we are prepared to abandon our traditional policy of providing free education and equality of opportunity for our youth. We can not in fairness continue to provide specialized education free to the few who propose to enter the professions, while denying education to the many for commoner vocations.

A community must pay either for the cost of training labor or for the much greater cost of inefficiency of labor, and inefficiency of labor means inevitably general industrial and commercial inefficiency. * * *

No American employer can hold his markets and continue to employ labor if his labor is relatively unskilled or if its costs for training greatly exceed those of his foreign competitors.

* * * * * * *

Can we expect to maintain our commercial standing in the world's markets if we neglect to train our labor * * *?

Having taken the lead in vocational education, we certainly shall not now permit ourselves to slip back because of a notion of false economy. I have been thinking particularly of the service rendered by vocational education in the broad fields of industry and commerce, but the social and economic value of such education is, of course, equally great in other fields. There is, in fact, no better economy than the economy of adequate training for the pursuits of agriculture, commerce, industry, and the home. Our youth must enter into these pursuits and it is in the public interest that they be well trained for them.

To provide such training is clearly a public responsibility. Education in general, including vocational education, for the youth, is democracy's most important business. * * *

It is customary to think of the present as an age in which machinery and automatic processes dominate industrial production in every field. It is nevertheless the fact, however, that the demand for the skilled mechanic has increased in direct ratio to the mechanization of industry. The services of the skilled mechanic, of the tool maker, of the expert trouble shooter in our great industrial plants have become and are becoming more vitally necessary and important. Although it is contrary to a widespread belief it is nevertheless unquestionably true that industry is constantly increasing its demand for the skilled worker to devise, to manufacture, and to maintain its mechanical equipment which each day becomes more highly sensitive to disarrangement and breakdown of remote origin, and requires the services of the highly skilled craftsman in its readjustment. After all, the machine is man's creation and is still dependent upon his ministering genius.

It has been suggested from various authoritative sources that the Federal Government should not exercise discrimination in participating in and contributing to our programs of public school education. It is not to be inferred that the Federal Government has undertaken to dictate policies which should be left to the States and local communities to formulate according to their local preferences and special needs.

With reference especially to the program of vocational education now in force, no Federal agency is authorized to formulate or initiate or impose any educational policy whatever upon any State or any local community. The Federal agency created by the Congress to administer the program of vocational education is required to approve plans formulated by the States themselves, provided these plans conform to the provisions of the Federal acts. Approval is a question of law and not of administrative discretion, for the Federal Board for Vocational Education has no authority whatever to go beyond the expressed provisions of the Federal statutes involved.

So far as plans submitted conform to the legal requirements their approval is mandatory. Thus it follows that under the system now in force there has been developed in the United States not one program of vocational education but 49 different programs—one for each State and one for the Territory of Hawaii. Each plan originated by local authorities considers their own local interests and needs exclusively and entirely independent of any supervision or suggestion on the part of any Federal agency.

The States themselves are practically unanimous in recognizing the freedom under which they have established their programs.

UNEMPLOYMENT

In announcing the appointment of the President's Emergency Committee for employment, Secretary of Commerce Lamont said among other things that there was no desire to underestimate the gravity of the problem of unemployment; that as a deeply human problem it enlists our sympathies, arouses our sense of responsibility, and challenges our social competence.

In this announcement the Secretary of Commerce emphasized the importance of finding employment for those unemployed.

On October 23, 1930, Colonel Wood, the head of the committee, said:

> The problem embraces two phases—the first is unemployment, the second provision for relief in those cases where employment is not available.

On October 28, 1930, Colonel Wood again emphasized the fact that the fundamental relief needed was a job for the unemployed.

On November 3, 1930, Miss Grace Abbott in calling the attention of the Nation to the sad plight of children affected indirectly by parental unemployment said:

> There is no cure for unemployment but employment. Everything else is merely palliative.

On November 18, Mr. J. C. Lawrence of the committee, speaking over the National Broadcasting Co. system said that he desired to make a reality of the belief that in America every man physically able to do so should find it possible to work at some job each working day of every year of his active life. To-day, he said, there is an organized effort of the largest group ever striving together to transform the hope expressed by the President that poverty be abolished into a reality.

On November 21 1930, Mr. Porter R. Lee, of the committee, speaking over the National Broadcasting Co. system, said that the best relief measures for unemployment are those which provide jobs for the unemployed. Such measures, he said, are best for the unemployed and best for the community at large.

These quotations taken from the releases issued by the committee are reproduced here for the purpose of indicating the attitude of the committee with respect to the necessity of securing jobs as the only form of adequate relief. The committee recognizes the principle of immediate relief in the form of benevolence as palliative and as justifiable where jobs are not available. Primarily, however, and of tremendous significance here, is the fact that the only cure for unemployment is employment.

Of greater significance is the fact that to-day industry is impressed with the principle of stability of employment, is willing to undertake a serious study of measures preventive of unemployment, and is unwilling longer to regard unemployment as an inevitably recurrent evil for which there is neither prevention nor cure.

In response to a request of the President's emergency commission for employment the Metropolitan Life Insurance Co. undertook an unemployment survey of its industrial policyholders located in a number of the largest cities of the United States. The survey was made early in December, 1930, and reveals the following interesting and striking results:

The survey was limited to 46 of the largest cities, selected with due regard to their geographical location and to their industrial character. A total of 213,787 families, embracing approximately 900,000 people was covered, and in these families there were approximately 350,000 wage or salary earners of all kinds. The survey revealed that, generally speaking, the lowest percentage of unemployment among the families canvassed is found in the smaller cities. The rate of unemployment ranged from 11 per cent to 30 per cent, the greater in the larger cities.

In reviewing the results the committee concluded that the survey tended to confirm its conviction that the most serious unemployment existed among industrial workers, especially in the largest cities. The survey indicated that during the first week in December, 1930, almost 5,000,000 persons, or approximately 10 per cent of the total number of persons normally employed in gainful occupations, were unemployed.

The committee concluded also that it was reasonable to assume from the survey that the number of executives, salaried workers, independent, professional, and other self-employed groups subject to unemployment would not when taken together constitute more than half the number of unemployed industrial workers.

Releases of the committee carried in many instances the programs advocated and actually in practice in many of the industries of the country designed to prevent unemployment or to provide measures of relief in the event of its occurrence.

Mr. Gerard Swope, president of the General Electric Co. presented the program adopted by his company to provide "peace of mind for the worker and especially to avoid and ameliorate the conditions of unemployment now and in the future." Among the provisions made by the General Electric Co. are the following:

1. Free group life insurance, to give peace and security of mind by providing for the uncertainty of life.

2. Aid in acquiring homes, a measure designed to assure the peace of mind not only of the worker but also of his wife.

3. Aid in saving, by permitting employees to buy bonds of the company.

4. Provision for old age, by providing for a retirement pension.

5. Stabilizing employment, which Mr. Swope regards as perhaps the most important from the standpoint of the worker.

Mr. Walter C. Teagle, president of the Standard Oil Co. of New Jersey, outlined the plan adopted by his company, emphasizing the need for regular and more sustained schedules of operation as necessary to free labor from the uncertainties caused by frequent shutdowns.

Mr. Cyrus McCormick, vice president of the International Harvester Co., said that his company had recognized the necessity of finding a temporary substitute for work and wages by lending its employees sufficient money to carry them through. The loans are paid by weekly check, like wages, and bear no interest.

Mr. Myron C. Taylor, chairman of the finance committee of the United States Steel Corporation, stated that his company had provided for the equitable distribution of work among all employees, giving to each a ratable portion, in addition to direct relief, credits, and relief through company welfare organizations.

Of greater interest, however, is the concept which Mr. Taylor takes of the entire industrial situation, as indicated by the following excerpts from his address:

> The present age has developed machines with vast and tireless resources; and we have to-day developed and perfected an accelerated dynamic civilization in which the acceleration comes from power. * * *
>
> In the face of an increased production we turn our thoughts mainly to the machine that made it possible, overlooking the fact that it is man who made possible this great production, through the machine; that it is an intriguing and continuing expression of his effort and his more cultivated intellect that is putting the world forward a distinct and glorious step in lifting from man's shoulders the burdens of the ages.
>
> The machine is of no use without the control and direction of man—and he can and does control it and direct it. Our problem—now that in so many ways we have brought the machine to aid the labor of our nation that all of our primary commodities, either of raw materials or of manufactured articles, are strongly influenced by it—is to organize and systematize its use, and in so doing to benefit mankind, not to injure or destroy mankind. Through these instrumentalities, the quality of mind that is developed to control and direct the mechanics of the age is necessarily of an improving and a higher order. That in itself means progress for the individual, and in that progress there is a cheapening of product, bringing a vast variety of useful and enjoyable commodities within the reach of all, and a corresponding awakening of the intelligence of man which promptly reaches out for these new benefits. Triumphant over the whole field stands not the machine, but the man.
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> * * * * * * *
>
> If there be any objective in this existence of ours worthy of the time and effort by us who are passing through it, it must be to raise mankind in general to higher levels of understanding and cooperation, of enjoyment and well-being.

Among the unemployed are many women, no longer able to rely upon father or husband for support. Industrial girl workers, always struggling to keep their heads above the chill waters of long hours and small wages, find themselves hard pressed to keep up with modern living costs. Miss Marion McClench, president of the National Federation of Business and Professional Women's Clubs, states that there are at present approximately 10,000,000 women gainfully employed under normal conditions, and that the suggested withdrawal of these women from industry would not solve the unemployment problem, but aggravate it.

As already indicated, Miss Grace Abbott, Chief of the Children's Bureau, believes that it is the children who suffer most when conditions of general unemployment prevail, and she says:

> We must get the children out of the bread lines and no child must suffer from hunger in the United States. * * *
>
> "Our experience in the last period of depression," Miss Abbott said, "showed that it was the children who suffered most. With little or no money to buy food, the children's milk supply was cut down and in many cases cut off entirely. As a result, thousands of children were undernourished and their health permanently injured by the shortage or lack of proper food. The same thing is happening to-day, and national economy makes it imperative to come to the relief of the children before it is too late.
>
> "Lack of food is not the only privation from which children suffer as a result of unemployment. There is a dangerous saving of fuel, economy in clothing, and household supplies, and overcrowding in cheaper quarters. Besides the deprivation of material needs, the loss of savings and the burden of debt that is piling up for the children as well as the parents, there is the suffering that perhaps can be understood only by those who have themselves been the victims of the dread uncertainty and fear that besets a workingman's family when the father is 'laid off.' The most important feature of unemployment is its effect on the family morale—the father idle about the house, unsettled, disheartened; the mother going out to work if she can secure it, and using up every bit of her strength in the double task of providing for the family's maintenance and caring for the household and the children; the children suffering from the depression and uncertainty of what the future may mean, which is even more to be dreaded than the discomforts of the immediate present."

Here, indeed, is presented a striking portrayal of the conditions which to-day obtain in the United States. That the Nation is aroused, that we have attempted herculean relief is undeniable. That we have arrived at no conclusion as to a permanent solution is as undeniable. One conclusion, however, and one alone stands out above all others, and that is that employment alone is the cure for unemployment. How this employment is to be secured and assured is still the problem. Unemployment insurance, retirement pensions, savings plans are all commendable, have their value and their function. Fundamentally, however, they are palliatives and not preventives.

The important problem is to develop and evolve permanent measures that will aid in preventing similar emergencies in the future. President Hoover says:

> Our present situation is not a new experience. These interruptions to the orderly march of progress have been recurrent for a century. And apart from the present depression the most urgent undertaking in our economic life is to devise further methods of preventing these storms.

The economic and social security of the Nation depends upon popular education in these subjects just as surely as our democracy depends upon popular education in other fields. It is upon the wage earner that the burden of unemployment falls with greatest weight. The problem of insecurity of job is ever foremost in the minds of 30,000,000 wage earners. These men and women are compelled to put their whole business investment into their jobs, they give their time, intelligence, skill, and cooperation in turning out the products of industry. The investment which they make is just as essential as is the investment made by stockholders and management, yet they are assured no returns upon their investment.

These wage earners constitute 80 per cent of the buyers in our retail stores, and spend 54 per cent of the Nation's income. They must be able to buy their share of the output of industry if industry is to continue to employ workers.

For the first time in the history of our Nation, there is now constructive, intelligent organization to meet this problem of unemployment. The American workman, waiting for a job, will determine the economic future and destiny of the Nation. The repercussion of his unemployment extends to all other employers in terms of decreased functioning power.

Any future program must be predicated upon the principle of prevention and long-range planning. There is a solution somewhere, even though we have not yet come upon it.

Indicative of a constructive approach is the program undertaken by the Young Women's Hebrew Association of New York, where, with the cooperation of the New York City Board of Education, the members of the association have been enabled to capitalize their enforced idleness by participation in classes aimed to improve their ability in stenography, typing, and bookkeeping, thus adding potentially to their earning capacity as well as to their early placement when once again their services may be in demand. Here indeed is an indication of a proper approach to the real solution of unemployment—training in vocational activity.

Vocational training carried on under the national vocational education acts will undoubtedly contribute to the relief of future unemployment caused by the introduction of new machinery, new operations, and new processes in industry. There is a manifest necessity of anticipating industrial changes far enough in advance so that employees destined to be displaced by them may be retrained for other types of work.[7] The retraining for new jobs of individuals who have been thrown out of employment by technological changes in industry is an essential function of the vocational program promoted under the national vocational education acts.

While vocational education can not become a panacea for the cyclical recurrence of business depressions nor solve all the problems of unemployment, it is not likely that these problems will be solved without an adequate program of vocational education.

Since the function of vocational education is to assist an individual to acquire a salable knowledge and skill, it is evident that it can be used as an agency of readjustment for the retraining of those whose earning power has suddenly been destroyed by changes in industrial operations and processes, or the introduction of automatic machinery. Too often in the past such changes have permanently deprived the worker of any market for the only skill and knowledge he possessed.

The problem is essentially no different from the problem of vocational education in any other case where a potential worker needs to be trained so that he can get a job, keep a job, or get a better job. Vocational education can not be used effectively to avoid unemployment unless opportunity is given for training before actual unemployment begins, and further, unless the training can be given for a job that offers reasonable assurance of employment.

Since those unemployed by reason of technological changes resulting in permanent lay-offs may be supposed to be in the position of the boy or girl who has not yet entered employment, it will be necessary for them to reselect an occupation for which they wish to be trained. This need calls for guidance and oftentimes occupational adjustment.

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[7] Dr. J. C. Wright, Director, Federal Board for Vocational Education.

In fact, the program of vocational rehabilitation of disabled civilians has demonstrated that adults are able to profit more immediately by vocational guidance than are the youth who have not yet gone to work. In order to discharge this function efficiently, efficient guidance and placement agencies must be available.[8]

It is an appalling fact that unemployment should have become in this country in the course of a very few months a problem of major proportions. It was unthinkable a few months ago that anything of this sort could happen. Only a few months ago our industries were operating at full capacity. No one at that time was endowed with sufficient foresight to enable him to foresee that unemployment would come upon us in such proportions or over such a broad area, permeating our agriculture, our industries, and our commerce in every line of activity.

What do we know about this plague of unemployment which has come upon us in our pride of economic efficiency, marvelous prosperity, and superabundance? What have we learned about it? How does it happen that such periods of economic prostration as we are now experiencing are recurrent? What are the fundamental causes? What remedies must be applied? Is unemployment, as some would have it, a price which must be paid for industrial progress? If it is, are we willing to pay that price? An increasing number of our citizens will answer, no. We will prefer inefficiency to unemployment, if we must choose between them. We will prefer the common necessities of life for all the people all the time, rather than the racking fever and chills of alternating abundance and penury. If we must choose there can be no doubt whatever as to which condition we shall prefer.

But is the choice necessary? Is there in fact no remedy for this evil?

We know that there are millions out of work, seeking work, and unable to find work at any price. Whether the number is four millions or five or more millions we have not determined. We have not been able to measure the amount of unemployment precisely, we have not been able to determine the causes of unemployment precisely, and in our desperation we have proposed many foolish remedies.

All that we know is that periods of depression have been recurrent in our industrial life. Economists have developed theories more or less conflicting and of undertermined validity. On the basis of scientific analysis we have been told that these cycles are occasioned by overproduction, by underconsumption, by excessive saving, by crop failures, by crop surpluses, by overinvestment, by underpayment of labor, by the accumulation of large corporate reserves in periods of prosperity for maintenance of interest and dividend payments in lean years, by unbalanced or misdirected production, by deflation, by credit policies, by speculation in stocks, or in land values, or in commodities. Exhaustive inquiries by official and unofficial agencies have developed a mass of data.

From all these analyses by careful scientifically trained students, we must infer that the causes of cyclical and of what has come to be known as technological unemployment are various, intricate, difficult to isolate, and fundamental in our economic life.

[8] Dr. J. C. Wright, Director, Federal Board for Vocational Education.

The sum total of our knowledge is that this baffling problem of unemployment must be solved if our social and economic structure is to endure.

Relief for the unemployed who have become destitute may be necessary, but it is no solution of the problem. Unemployment insurance may be excellent, but it, at best, is only insurance against an evil. So long as employment is unstable, we must provide against the evil of instability. What the worker out of a job wants is another job, and under our present highly organized industrial system, providing a job for the man out of work, through no fault of his own, has become a social responsibility. This responsibility has been partially and very inadequately discharged.

COMMERCIAL EDUCATION

Neither the national vocational education act of 1917 nor the subsequent amendments thereto made any provision for Federal financial aid to the States for developing educational programs for office and store workers. The act of 1917 does, however, provide that the Federal Board for Vocational Education shall make studies and investigations and reports with particular reference to their use in aiding the States in the establishment of vocational schools and classes and in giving instruction in commerce and commercial pursuits.

To meet the varied demands from all parts of the country for assistance in the organization and administration of public school courses for those preparing or already engaged in commercial pursuits the commercial education service of the Federal Board for Vocational Education has conducted several different kinds of research. It is of particular significance at this time of economic depression and industrial crisis that many of the 5,000,000 of unemployed are recruited from the group ordinarily referred to as those engaged in commercial activities—clerks, cashiers, bookkeepers, salesmen, etc. In all such periods, this great group of workers inadequately designated as clerks, contributes very largely to the temporarily unemployed.

Engaged in occupational activities ranging all the way from simple tasks requiring little or no formal training and that training usually acquired while engaged upon the task itself, to the more complex and intricate of technical occupations requiring relatively long periods of formal training and considerable practical experience, this group along with other groups, finds itself ever at the mercy of sudden changes in industry or commerce, of industrial or commercial processes; and may be particularly susceptible to displacement by mergers, consolidations, and reorganizations. It is not unusual for employers of this type of labor to place a premium upon specialized training of a particular type, or conversely a penalty for its lack. Manifestly an employee trained at a given task in a particular enterprise lacks the adaptability and versatility which vocational training involving a knowledge of the general principles of his chosen vocation could afford, and consequently pays the penalty either in lower wages or in deferred increases in wages.

Within recent years high school pupils enrolled in commercial courses have constantly increased in number. The demand for this sort of training is urgent, increasing, and widespread. The value of occupational courses of this type will be readily apparent. More important even is the imperative demand on the part of trade associations of one kind or another for the training of their employees who,

long since having left the formal environment of the school, find training in some aspect of their vocational activities absolutely necessary. This is well illustrated by the opening in New York City, under the joint supervision of the New York City Board of Education, of 10 evening classes with an enrollment of 400 meat dealers. Retail grocers, too, have sought to avail themselves of this form of technological education. These experimental activities are apparently of great significance as a contribution to vocational education, especially when the very large number of retailers in the country is considered.

The congressional commission which reported to Congress in June of 1914, including the original draft of the vocational education act, did not recognize the need for Federal aid to commercial education. It felt that fairly adequate provision was already being made in public and private schools for this type of training. Accordingly, it recommended no special fund to be apportioned to the States for the promotion of commercial education on a footing of equality with agricultural and trade and industrial education. This type of vocational education has therefore not received the stimulus of Federal aid, and one very apparent consequence of this omission is found in the present status of commercial education in this country as compared with vocational education in other lines. Commercial education is in a relatively backward state.

Moreover, the conception of commercial education has broadened out since 1914. It is no longer defined in terms of typewriting, stenography, and bookkeeping. These are, of course, still important special lines of commercial employment, but commercial education as defined to-day takes a much wider range. It is, in general terms, education for commerce, for merchandising the products of our farms, our manufacturing plants, and our mines. This is more than typewriting, stenography, and old-fashioned bookkeeping. It embraces all of the large groups of workers employed in wholesale and retail selling. Trained efficiency in marketing the products of labor in our factories and on our farms is obviously as essential for our economic prosperity as efficiency in production. Commercial education should be placed on a footing of full equality with agricultural, trade and industrial, and home-making education. Provisions made under the act of 1917 for this type of education are entirely inadequate.

VOCATIONAL REHABILITATION

The type of unemployment which has been considered in these pages is partly temporary in character, partly periodical, and cyclical in occurrence, but in a very large measure it is of technological origin and is a permanent and continuous condition of industry, for in every period there is a large fringe of unemployment of this character, which is a continuous and increasingly dangerous social menace.

There is, however, another form of unemployment which originates in the physical handicaps that afflict the individual, usually through no fault of his own, but which serves nevertheless to incapacitate him for gainful occupation, rendering him a burden not only upon himself but particularly upon society. Society at one time accepted this form of affliction with all its attendant results as an inevitable burden, regarded the afflicted individual, if not as an incurable, certainly as one incapable of participating in the normal life of the group, and made no effort at rehabilitation. To-day, modern society accepts neither the

doctrine of permanent handicap nor vocational incompetence, but seeks to place the physically handicapped upon the basis of self-support through educational methods adapted to that end.

The close of the fiscal year 1930 marked the end of the first decade during which the Federal Government participated in State programs for vocational rehabilitation of the civilian disabled.

During the fiscal year 1930 more than 4,500 disabled persons of all types were fitted for and placed in remunerative employment under State programs with Federal participation. These disabled persons were rehabilitated into more than 600 different occupations, ranging from unskilled to highly skilled, including professional and technical employment. At the close of the year more than 20,000 persons were reported to be upon the State rolls in process of rehabilitation. Experience has revealed that the total cost of rehabilitating a disabled person and rendering him self-supporting does not exceed an average of $300, a sum less than that which would be required to support him in idleness for a single year.

The original act providing for the participation of the Federal Government in vocational rehabilitation in State programs became effective June 2, 1920, with a limitation of four years. In 1924 Congress extended the provisions of this original act for a period of six years; and in 1930 provided for a further extension of three years, so that at present this extremely valuable and important work of fitting the civilian disabled of the nation for self-support, must, so far as the Federal Government is concerned, come to an end within two years, unless Congress in the meantime provides for its continuation by appropriate legislation. Recurrent uncertainty as to the attitude of Congress with respect to this exceedingly important social service tends constantly to interfere with its progress and orderly development.

To-day but four States of the Union are without appropriate enabling legislation necessary to avail themselves of Federal aid in this important and vitally essential work. These four States are Delaware, Kansas, Vermont, and Washington. In Delaware the State educational officials are making an effort to secure legislation which will permit this work to begin in the next fiscal year. In Kansas a special commission was appointed by the governor to study the needs of disabled adults and physically handicapped children, and in Washington social agencies, labor organizations, and educational officials are all seeking to secure the enactment of legislation designed to permit the undertaking of this work.

A word as to the character of the rehabilitation program. To begin with, this program is not concerned with the disabled soldiers but with the civilian handicapped; and by handicapped persons is meant such individuals as have been deprived of their earning power through some physical disability or who have never been able to exercise an earning power as a result of congenital or other handicap. Among the causes of such handicaps as are here alluded to are included public and industrial accidents. Real rehabilitation consists in getting an individual into a job for which he is not handicapped. In other words, the rehabilitation service set up under this program of cooperation with the States is made available to all types of the disabled. Special groups, such as tuberculous, blind, deaf, and those with cardiac diseases have in a number of States been given the benefit of special programs devised for their particular needs.

The service rendered by this program includes (1) making contact with the handicapped individuals; (2) finding out what he can do; (3) training him so that he can do it; (4) placing him on a job; and (5) following him up to make certain that he can compete on equal terms with normal individuals and with unimpaired earning power in the employment for which he has been trained.

It should be understood that the program of rehabilitation as carried on involves cooperation with numerous public and private agencies. As an illustration of the cooperative character of the program may be noted the experience of the rehabilitation service in the District of Columbia during the initial year of its operation, 1929–30, in which year the rehabilitation service cooperated with the United States Public Health Service, the United States Compensation Commission, Washington social service agencies, hospital social service departments, the District of Columbia Board of Public Welfare, and other organizations cooperating on a less formal basis. This sort of cooperation characterizes the work in each of the 44 States which have entered into cooperation with the Federal Government.

Under the vocational rehabilitation act of 1920, the Federal Government adopted and has continued the policy of sharing with the States the cost of rehabilitating the disabled. From the success which has attended the program of civilian rehabilitation it can no longer be contended that rehabilitation is not of social and economic value in conserving the man power of the Nation. The possibilities of the program have aroused the imagination of leaders in the fields of education, industrial management, social work, and of organized labor. The rehabilitation forces of the State and Federal Governments have become important agencies of social welfare in providing opportunity for workers who are disabled by accident, injury, disease, or congenital conditions in becoming self-supporting.

The importance of Federal aid in the program is signalized by the fact that regardless of what measures the States may themselves have adapted they seek continuously and increasingly the services of the staff members of the Federal Board for Vocational Education. This assistance has taken the form of consultation upon proposed policies and methods of organization. Experience has indicated that a central agency can render a valuable service to the States by disseminating information concerning the particular problems and experience of a State and the program which it may have adopted to meet them.

Since the problem of rehabilitation is national in scope, and since it affects so intimately the national welfare, it is imperative to place the entire program upon a permanent basis through appropriate legislation.

Through industrial and public accidents alone more than 180,000 persons become disabled in the United States each year, Reliable statistics show that of every 100,000 accidents 762 are fatal; 95,388 result in temporary disability; approximately 100 in permanent total disability; and 3,788 in permanent partial disability. From all causes—accident, disease, and congenital—more than 200,000 persons become permanently disabled in the United States every year.

Accidents occur in the factory, on the farm, on the street, and in the home. For every work accident there are two public accidents, and each year finds the number of accidents increasing. In the wake of these accidents distress follows surely and rapidly. When accidents happen to the breadwinners of the family the result is frequently

distress to wives and mothers and children. It is not merely the personal distress, however appalling that may be, which constitutes the problem, but the effect upon industry, the community, and the State as well.

Industrial accidents alone cause an annual loss of more than a billion dollars, in addition to the indirect losses of many millions of dollars paid under State compensation laws—a charge upon industry affecting the earnings of both employers and employees.

In every State there are institutions for the helpless, and to maintain such unfortunates a sum of from $300 to $500 per individual per year is requisite. But the loss which the community sustains in the destruction of happiness and self-dependence of the individual is far greater. The inability of a person to earn his own living or to support his dependents brings discouragement and a loss of morale which may well threaten the welfare of the State. Vocational rehabilitation is the means by which a disabled person may be fitted for remunerative employment, the objective being to establish or reestablish an individual in a definite employment consistent with his physical, mental, and vocational capacities upon an economic competitive basis, rather than upon the basis of charity or tolerance.

The gain from rehabilitation has been repeatedly and successfully proven. In a Southern State in one fiscal year the average weekly wage at the time of the disablement of all persons rehabilitated during the year was $9.21. After rehabilitation this wage increased to $21.75. Of the group, 77 per cent had no earning power during the period of disablement, while 30 per cent had never worked prior to rehabilitation. In a mid-western State the res ts of a 5-year period are as follows:

Total number of disabled persons rehabilitated	1, 036
Total gross annual earnings before rehabilitation	$499, 208
Total gross annual earnings after rehabilitation	$1, 159, 948
Per capita annual earnings before rehabilitation	$481
Per capita annual earnings after rehabilitation	$1, 119
Per capita cost of rehabilitation	$242
Increase in individual earning power per year	$637

On the basis of this return a corresponding gain characterizing the results in the States generally will represent an increase in the annual earning power of the 45,000 persons rehabilitated since the beginning of the program in 1920 of approximately $27,000,000. The cost of maintaining these persons without rehabilitation would have been approximately $13,000,000 a year. This has been accomplished at a total expenditure during this period of less than $12,000,000 of local, State, and Federal funds.

A rapidly developing phase of general educational programs in the States is that which contemplates special service for handicapped children. Special classes, schools, and facilities are being provided, including provision for vocational guidance as well as for prevocational and vocational training.

Whatever may be established as a basis for the justification of the program of rehabilitation so far as it applies to our adult population, there certainly can be no question of the urgency of such a program for the needs of the physically handicapped children of the Nation.

The care, cure, and education of our physically handicapped children is justified by every principle of the national concept of a democratic government. Reliable statistics indicate that there are in the United States approximately 250,000 physically handicapped

children mostly located in the rural districts. Many of these children suffer from handicaps of such a character as prevent their attendance upon school and the consequent inability therefore of acquiring such training as the public school has to offer.

Since in innumerable cases these handicaps are removable and when removed enable these children to acquire the education, either general or vocational, or both, to which as children of a Republic they are entitled, it is apparent that every effort should be made to accord them such opportunity.

A pressing need at this time is for some action by the Congress indicating whether or not the Federal Government's participation is to be continued. Progress in the future will depend largely upon what action is taken by the Federal Government.

The programs of vocational education, rehabilitation, and the restoration of the physically handicapped children of the Nation and the development of those programs indicate conclusively that although we have at times regarded this form of service from the viewpoint of the economic in terms of dollars and cents they nevertheless involve a far greater and more fundamental concept—namely, the conservation of the human resources of the Nation and the welfare and happiness of the men, women, and children of the Nation. Education designed to confer upon the masses of the people the ability to secure the blessings which must come from gainful and stable employment, the training of the youth of the Nation in the means of making a livelihood, and the restoration to health and earning capacity of those who through no fault of their own have become dependent, are primary considerations.

The results of these programs speak for themselves in terms of human happiness, welfare, and the removal of such social injustice as may arise not from unequal distribution of wealth but from an unequal distribution of opportunity. Each of these programs represents an attempt on the part of the Congress, acting in cooperation with the States, to correct a situation of obvious social disparity. Each of these programs also represents the assumption on the part of the National Government of its proper share of responsibility for remedying these situations.

The Congress has been confronted within the year with problems affecting directly the welfare and happiness of the people. As never before the Congress has been made pertinently familiar with the distress and unhappiness resulting from a lack of knowledge of our economic structure and our industrial organism, and in its attempt at solution has sought aid upon all sides. Here indeed is strikingly revealed a fundamental interrelationship between education and physical capacity and gainful occupation which has been but partly recognized in the past. The demand has arisen from the people themselves, and such expenditures as Congress has made in the past, but a small part indeed of the total can be regarded but as an investment in the human resources of the Nation itself. The Nation, the States, and the local governments are all interested in the education of our citizenship for vocational efficiency, in the vocational rehabilitation of our disabled civilian adults, and in the restoration of our physically handicapped children. The Nation must participate liberally in the promotion of these programs and their more liberal maintenance in the future. The work should be stimulated and encouraged by appropriate legislation.

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